IN THE SPECIFICATION:

Please delete the paragraph beginning on Page 2, line 31 and replace with the following:

Cryptographic systems may be implanted using hardware. As an overview summary, hardware cryptography implementation is required in certain industrial sectors such as financial areas. It is important that confidential information is kept in secure location. A classic example is the storage of private key. Although the access to the private key can be limited by the data structure/nature in software (e.g. declaring the key as a private attribute which cannot be accessed by any outside application), the memory that stores the key is not protected by secure means. An intruder/adversary can read the key information by ~~brutal~~ brute memory reading or any work around. Besides secure storage, hardware also provides an environment to execute operations that involve confidential data such as digital signature and encryption. Hardware provides a secure means for storing confidential data and executing sensitive operations.

Please delete the paragraph beginning on Page 4, line 3 and replace with the following:

The present invention provides a method, apparatus, and computer implemented instructions for executing cryptographic operations in a single architecture that embraces the advantages of both software and hardware implementations. Responsive to a request to perform a cryptographic operation, one of a software process and a hardware process is selected (whether specified by the application or picked by the architecture according to some policy) for performing the cryptographic operation based on a policy which process results ~~in an~~ with available resources to perform the cryptographic operation to form a selected process which will yield an optimal performance. The cryptographic operation is performed using the selected process.

Please delete the paragraph beginning on Page 10, line 20 and replace with the following:

API interface **304** provides a common interface for applications requiring cryptographic operations. ~~Through~~ API interface **304** allows application to make calls or send requests for cryptographic operations without requiring application to format these calls or requests a particular process within cryptographic systems **302**. Thus, if different hardware and software processes are implemented for hardware cryptographic process **308** and software cryptographic process **310**, applications are not required to make different calls and request for each particular process. API interface **304** translates the request or call from an application, such as, application ~~300~~ 300, into the appropriate format for a particular cryptographic process within cryptographic system **302**.

Please delete the paragraph beginning on Page 11, line 30 and replace with the following:

Hardware cryptographic process **308** and software cryptographic process **310** may ~~be implemented using~~ implement any of the known algorithms, such as, for example, Rivest-Shamir-Adleman (RSA) cryptographic algorithms, Digital Signature Algorithm (DSA), and Diffic-Helman Cryptographic algorithms.

Please delete the paragraph beginning on Page 12, line 14 and replace with the following:

If, however, no particular type of process is requested by application **300**, policy engine ~~300~~ 306 may select the particular type of process using a predefined set of rules. For example, policy engine **306** may include rules that select the particular process based on available resources in the data processing system. The rules may select the process, which uses the least amount of available resources or particular resources. The particular process any also be selected based on the process that provides the fastest processing. The set of rules may leverage the workload of the hardware/software. For example, if

hardware is in use by another application, software will be used, and this rule will be a predefined dominant factor. An example of another rule is if the service is encryption, only hardware implementation is used. This type of rule is performance oriented to provide the fastest implementation. Further, in these examples, policy engine **306** is not statically configured. An application can configure policy engine **306** dynamically as desired. Different applications can concurrently run on this architecture with different configurations. It is up to the application whether it wants to dynamically change the configuration or predefine the usage of each algorithm services.

Please delete the paragraph beginning on Page 16, line 22 and replace with the following:

The process begins by receiving a request (step **600**). Thereafter, one or more cryptographic ~~operation~~ operations are identified by the request (step **602**). The mechanism of the present invention allows for breaking down a request into different cryptographic operations and selecting the type of cryptographic processes best for each operation based on a policy. Many of the cryptographic algorithms are a combination of several cryptographic algorithms. For instance, digital signature composes of message digest and public private key encryption. Less sensitive operations such as message digest may be performed by the faster implementation, software, while the more sensitive operation, encryption, may be performed by the more secure hardware.

Please delete the paragraph beginning on Page 29, line 7 and replace with the following:

The present invention provides a method, apparatus, and computer implemented instructions for executing cryptographic operations. Responsive to a request to perform a cryptographic operation, one (or more) of a software process and a hardware process is selected for performing the cryptographic operation based on a policy which process results ~~in a~~ with available resources to perform the cryptographic operation to form a selected process. The cryptographic operation is performed using the selected process.

Necessary object conversions, which is transparent to the application, is carried out in order to convert objects to usable forms of the selected process(es).